

Abstract

The present invention relates to an improved process of analytical and quantitative isolation of withaferin-A from *Withania somnifera* (Sanskrit: Ashwagandha, English: winter cherry) and other plants and products therefrom, said method comprising steps of selecting most appropriate extraction medium composition, with extraction solvent system consisting of a defined admixture of water and alcohol in a range of proportion of alcohol within a narrow range of (methanol, ethanol etc.) (preferably 60% alcohol and 40% water) for the dry plant material and from 60% to 80% alcohol in the alcohol-water mixture for fresh plant material, the invented extractant composition leading to better/improved yields and accurate quantitative estimations of withaferin A existent *in planta* or *in materia*, selecting effective state of the tissue particularly use of the fresh materials improving yields, providing logistic benefits of isolations and diagnosis, and according several other advantages including technological, economic, preventing contaminations etc., the said method being valuable and advantageous for standardization of botanicals, metabolomic characterization of plants particularly chemotypes, analyzing metabolic transitions under physiological, genetical, environmental and biotic perturbations.